Factorial Analysis of Variance (ANOVA) and Analysis of Covariance (ANCOVA) in SPSS

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(1-50pm to (approx) 4-30pm including (approx) 20 minute coffee break)

Target Audience

Anyone who wants to use Analysis of Variance or Analysis of Covariance in SPSS and who wants to understand the concepts, assumptions and checks for these techniques. A basic working knowledge of SPSS and hypothesis testing would be useful.

The course tutor, Mario Hair, is now an Independent Statistics Consultant but previously was an academic at the University of the West of Scotland. He has over thirty years experience of using SPSS. As a teacher he has taught courses on SPSS for many years and as a researcher he has published academic papers on a wide range of topics. As a consultant he is routinely involved in projects where statistical analysis using SPSS is required and has completed projects for a wide range of clients.

Aim

This course is a practical hands-on introduction to factorial Analysis of Variance (ANOVA) where there is a single dependent interval level variable but one or more categorical grouping variables. It explains the reasoning behind ANOVA, how to carry it out in SPSS and what to look for in the output. The course then moves on to consider Analysis of Covariance (ANCOVA) which is an extension to ANOVA that takes into account extraneous interval level confounding variables. In particular it highlights situations when ANCOVA is a preferable procedure to ANOVA. Examples are taken from Education, Physiotherapy and Ophthalmology.

Course Content

- When is ANOVA better than multiple t-tests?
- Factorial Analysis of Variance in SPSS including post-hoc tests
- Checking underlying assumptions in ANOVA
- Non-parametric ANOVA
- When is ANCOVA better than ANOVA?
- Factorial Analysis of Covariance in SPSS including post-hoc tests
- Checking underlying assumptions in ANCOVA
- Non-parametric ANCOVA